GENERALIZATION OF TREATMENT OF OUT-HOSPITAL PNEUMONIA IN CHILDREN ACCORDING TO CLINICAL-ANAMNESTIC ANALYSIS

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Annotation: *Community-acquired pneumonia in children remains a pressing problem today both in the world and in our country due to the prevalence of morbidity and mortality rates. The current features of the course of OHP in children in a children's hospital were analyzed, the main risk factors for the occurrence of this disease and possible directions for prevention were identified, its complications in children by age, as well as the quality of medical care were assessed. Care. In order to improve diagnosis and treatment, we have presented the optimal method of treating children with pneumonia outside the hospital during hospitalization.*

Key words: *children, community-acquired pneumonia, risk factors, treatment.*

ОБОБЩЕНИЕ ЛЕЧЕНИЯ ВНЕГОСПИТАЛЬНЫХ ПНЕВМОНИЙ У ДЕТЕЙ ПО ДАННЫМ КЛИНИКО-АНАМНЕСТИЧЕСКОГО АНАЛИЗА

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Аннотация: *Внебольничная пневмония у детей остается на сегодняшний день актуальной проблемой как в мире, так и в нашей стране в связи с распространенностью показателей заболеваемости и смертности. Проанализированы современные особенности течения ВП у детей в детской больнице, выявлены основные факторы риска возникновения этого заболевания и возможные направления профилактики, оценены его осложнения у детей по возрасту, а также качество медицинской помощи. С целью улучшения диагностики и лечения нами представлен оптимальный метод лечения детей с пневмонией вне стационара на этапе госпитализации.*

Ключевые слова: *дети, внебольничная пневмония, факторы риска, лечение.*

Community-acquired pneumonia (CAP), known since ancient times, is a pressing respiratory problem in childhood to this day. There remains a steady increase in morbidity and child mortality from this pathology throughout the world [1, 2].

For “X-ray positive” pneumonia, according to hospitalization data in economically developed countries, the incidence is 1.5–3 per 1,000 children 0–15 years old and 3.4–6.8 in children 0–5 years old.

According to WHO, the share of pneumonia among the causes of mortality in children under 5 years of age in the world is 15%. In Uzbekistan, according to the Ministry of Health of Uzbekistan, the incidence of CAP among children under 14 years of age is approximately 2 times higher than the incidence for the general population [6]. The incidence of CAP among children and adolescents in Uzbekistan is estimated at 7.95–8.86% with a maximum prevalence of 2–4 years and 15–18 years. According to research materials, about 15–20 per. 1,000 children in the first three years of life get sick annually and about 5–6 per. [6].

1,000 children over 3 years of age, the incidence varies in individual regions of the country - from 2.3 to 24.3% [3,7]. The statistics of our hospital reflect an increase in hospitalizations of children with CAP, so, according to the pulmonology department of the Andijan Children's Medical Center, the share of patients in the morbidity structure in 2017 increased by 33.7%, and in 2018 by another 37.0%. Our statistics for 2021-22 is not reliable, since during this special period, marked by the emergence of a pandemic of a new coronavirus infection, the routing of sick children with CAP involved their hospitalization in specialized hospitals for the treatment of COVID-19.

The purpose of the work is to analyze the current features of the course of CAP in children in a children's hospital, depending on age, premorbid background and tactics for managing these patients at the prehospital stage to determine the main risk factors for the occurrence of CAP and its Among all the premorbid background factors analyzed by us, the table presents those of them, which are most often identified in children in different age groups.

If prematurity and low birth weight are of particular importance in young patients, transfer to artificial and mixed feeding before 6 months of life,

the presence of a burdened allergic history, then in children over 3 years of age, in addition to those indicated, such factors include frequent respiratory infections, existing persistent infections of the respiratory tract (herpetic, mycoplasma) and chronic foci of infection. Without a doubt, the results of our analysis once again prove the need for organizing a healthy lifestyle for a child, starting from birth, and an individual approach to each child with a respiratory infection.

Analysis of the prehospital stage of patient management showed that the respiratory infection began acutely, the duration of this stage in group 1 was 3–4 days from the moment of seeking help, in groups 2 and 3 from 3 to 6–8 days. Indications for hospitalization of sick children were often clinical signs of intoxication (decreased appetite, refusal to eat and drink, disturbances in the child’s behavior), increased body temperature

for 2–3 days or more with a short-term effect or no effect from antipyretics, as well as the presence of shortness of breath , in rare cases - the result of an x-ray examination. The complex of treatment carried out at the outpatient stage for patients of the 1st group included only symptomatic therapy, and in the 2nd and 3rd groups the vast majority of patients also received antibacterial therapy in the period from 1 to 5 days at the time of hospitalization (90.4 and 92.7% respectively).

Diagnosis, treatment and prevention of CAP in children in the Republic of Uzbekistan. are carried out on the basis of the FKR. Our study revealed defects in patient management at the prehospital stage. Thus, pediatricians at clinics quite often ignored the recommendation to begin antibacterial treatment with the prescription of amoxicillin as the drug of choice, according to the FKR.

Our analysis revealed the prescription of this drug in only 41.3% of patients in group 2 and 16.9% in group 3. In most cases, macrolides or oral cephalosporin antibiotics were prescribed. At the same time, evidence has been revealed of early prescription of antibiotics, sometimes in low doses, without taking into account recommendations, which contributes to the development of antibiotic resistance.

In some cases, the prescription of amoxicillin was ineffective, probably due to the development of atypical pneumonia (mycoplasma, etc.), which required an additional differential diagnosis taking into account age, clinical manifestations, assessment of laboratory and radiological data.

At the same time, the analysis showed that additional laboratory and x-ray examinations were prescribed by doctors in children's clinics quite rarely.

X-ray diagnostics is the “gold standard” for the diagnosis of pneumonia and should be prescribed according to indications, which include the presence of fiscal symptoms of pneumonia, persistent (≥3 days ≥38.0 °C) fever, general signs of intoxication and respiratory failure in the absence of bronchial obstruction. An analysis of medical records revealed that ambulatory chest radiography was performed quite rarely and only in patients over 3 years of age. Thus, in the 2nd and 3rd groups of such patients there were 7.6 and 13.7%, respectively, while the X-ray examination was performed in the 2nd group after 3–4 days, which fully corresponds to FCR, and in the 3rd group group only 5–6 days after treatment. Laboratory examination in the form of a general blood and urine test was prescribed only to every fifth (19.2%) of children aged 3–7 years, and even less often to patients aged 7–14 years (10.5%). To date, there is no doubt about the recommendations for a laboratory examination with an assessment of the hemogram, performing timely X-ray examinations taking into account data from dynamic monitoring of the condition of a patient with pathologies of the respiratory tract, which can significantly improve the level of diagnosis and treatment of CAP at the outpatient stage. However, in the context of a children's clinic, pediatricians probably do not always have the opportunity to conduct such a diagnosis.

According to the results of an X-ray examination, carried out both at the outpatient and inpatient stages of treatment and which made it possible to verify the diagnosis of CAP, in early-age patients focal pneumonia predominated (88.0%), segmental and polysegmental pneumonia was less often identified (10.5%) pneumonia, lobar pneumonia was found in only 1 child; in preschool children, focal and focal-confluent pneumonia predominated (61.6%), segmental/polysegmental pneumonia was found in 22.1% of patients; in schoolchildren, on the contrary, the segmental/polysegmental form of pneumonia prevailed – 54.0%, focal and focal-confluent pneumonia was less frequently detected (29.8%), lobar pneumonia occurred with approximately the same frequency in patients of groups 2 and 3 (about 15% of patients). Laboratory examination of patients with CAP, according to the FKR, includes examination of a hemogram, biochemical blood parameters, general urine analysis, as well as, if indicated, bacteriological, serological and other in-depth diagnostic methods. Changes in the hemogram typical of CAP, namely neutrophilic leukocytosis over 15 × 109/l and an increase in ESR over 15 mm/h, were detected with different frequencies in the studied groups of patients, but not always. Thus, in young children, these indicators in the form of a complex as criteria for VP were noted only in 47.8% of cases, in children 3–7 years old - 59.6% of cases, and in children 7–14 years old in 59.7% of cases, otherwise, these indicators were multidirectional or partially remained within normal limits. This was probably due to a number of reasons related to both the etiology of the disease and the activity of the inflammatory process, the individual response on the part of the sick child, and the treatment performed on an outpatient basis. Biochemical blood parameters in patients did not differ significantly by age.

Bacteriological and other diagnostic methods to determine the etiology of pneumonia, as a rule, were not carried out due to the low information content and technical complexity of these diagnostic methods [4].

Examination of patients with CAP, in accordance with the FKR, includes an ECG to assess the functional state of the cardiovascular system and timely diagnosis of complications. Previously, in our studies, we showed the diagnostic significance of this method, as the most accessible and informative in assessing the condition of patients [5].

ECG studies were performed in 136 patients with CAP of all age groups. The study was carried out on children against the background of prescribed complex therapy. According to the results of the study, the patients had no signs of severe organic damage to the cardiovascular system. Functional changes prevailed in the form of heart rhythm disturbances,

In particular, tachycardia at normal body temperature in 38.0% of patients, sinus arrhythmia in 26.4%. Partial blockade of the right branch of the Hiss bundle was detected in 13.9% of patients; in 26.8% of patients, a combination of such blockade with the indicated rhythm disturbance was noted. Analysis by age showed no significant differences.

When analyzing case histories, special attention was paid to cases of complicated CAP. The main intrapulmonary complications of CAP are, according to the literature, pulmonary destruction and pleurisy, which in 85–90% have pneumococcal etiology, as well as atelectasis.In the 1st group there were no such patients, in the 2nd group 7 patients (6.7%) were treated, in the 3rd group - 22 (7.4%) with meta-pneumonic and synpneumonic pleurisy, in addition, in group 3 there were 2 children (1.6%) with atelectasis. Complications in the form of pleurisy were observed in patients who were hospitalized 5–8 days after visiting the clinic and could be due to both the etiology of the disease and, possibly, late diagnosis and inadequate antibacterial therapy at the outpatient stage of treatment. All these patients completed treatment in the infectious diseases department with a successful outcome; they did not require surgical care. A special group of patients was represented by those who suffered CAP complicated by broncho-obstructive syndrome (BOS). The issue of the frequency of this complication of CAP is still being discussed in the literature.

According to some researchers, BOS practically does not occur in patients with CAP, and its presence is more likely to exclude this diagnosis [4]. Other authors, on the contrary, confirm the possibility of BOS manifestations in patients with CAP, especially at an early age [6]. An additional analysis of the medical records of patients with BOS against the background of CAP was carried out. We relied on available literature data that the main criteria for the diagnosis of focal pneumonia complicated by biofeedback are typical clinical manifestations of biofeedback in a patient with intoxication, inflammatory changes in the blood test, and the presence of radiological signs of pneumonia. According to our data, signs of BOS were detected in the majority of young children (38 patients or 56.7%), much less often BOS complicated the course of CAP in children 3–7 years old (11 patients or 10.6%) and in schoolchildren (10 patients or 8.1%). The predominance of the number of young children with CAP complicated by biofeedback in the hospital is probably due to the frequent hospitalization of such children, since this syndrome significantly aggravates the severity of the condition.

The anatomical and physiological features that contribute to the development of biofeedback in young children against the background of respiratory infection are well known. The frequency of bronchial obstruction that develops against the background of infectious diseases of the lower respiratory tract in young children is, according to various authors, from 5 to 40%. However, this condition is typical for acute bronchitis, and the development of biofeedback against the background of pneumonia required additional research.

The results of the analysis of the premorbid background in terms of age in patients with CAP complicated by biofeedback and without complications (biosis+ and biofeedback-) are presented in Table. 2. At the hospital stage, all patients received complex therapy according to the FKR, against the background of which fever in children usually did not exceed 2–3 days, but in 6.5% of young children, 18.3% of preschool children and 13.7% of

schoolchildren it persisted for up to 4–6 days, which required adjustment of antibacterial and detoxification therapy. In some cases, in patients with pleurisy (in group 2 - 3.9%, in group 3 - 10.5%), body temperature remained elevated to subfebrile levels with periodic rises to febrile values during the first 8–12 days. The timing of radiological resolution of CAP, the duration and volume of antibacterial therapy depended on the clinical and morphological form of pneumonia, concomitant intrapulmonary complications and were longer in children over 3 years old.

Courses ofantibiotic therapy for more than 10 days, combinations of antibiotics, sometimes with the prescription of repeated courses, were indicated for school-age patients more often - in 19.3% of cases versus 5.9% in the group of young children and in 14.7% of cases in the group of preschoolers. This increased the length of hospitalization, which is associated with the risk of re-infection of patients in the hospital.

Conclusion. Our study showed the need to take into account premorbid background data in children with acute respiratory diseases when assessing the severity of the condition in order to early detect CAP and its complications, as well as timely diagnosis of chronic bronchopulmonary pathology. In order to prevent CAP and its complications, the principles of organizing child care, rational nutrition and infection prevention are still relevant.

Improving the quality of diagnosis of CAP at the prehospital stage is possible only with an individual approach to any acutely ill child, the results of his observation in order to identify indications for timely laboratory and x-ray examination, and the rational prescription of treatment, especially antibacterial therapy, taking into account the principles of evidence-based medicine, improves the prognosis of the course. diseases, reduces the length of hospitalization, and also helps limit the growth of resistance of microbial flora. The course and severity of CAP in children, the occurrence of complications, and therefore the volume of necessary examination and treatment to achieve a favorable outcome of the disease, depend both on the age of the children, the characteristics of their premorbid background, the presence of concomitant pathology, and on the quality of care provided to these patients at each stage treatment.

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